

Substitute Sequence Listing

<110> Vermeij, Paul
<120> Lawsonia intracellularis 26 kD subunit vaccine
<130> I-2003.023 US
<140>
<141>
<150> PCT/EP2004/053342
<151> 2004-12-08
<160> 2
<170> PatentIn version 3.3
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<212> DNA
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<221> CDS
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Met Lys Lys Leu Leu Leu Leu Ser Ile Leu
1 5 10
ttt cta acc cca agt att acc ttg gcg gaa ggt aat act ttc aat gat 160
Phe Leu Thr Pro Ser Ile Thr Leu Ala Glu Gly Asn Thr Phe Asn Asp
15 20 25
agt ttc aac aag gct aag cgc ata ctg caa gat gag gtg tat tac gac 208
Ser Phe Asn Lys Ala Lys Arg Ile Leu Gln Asp Glu Val Tyr Tyr Asp
30 35 40
cac caa gtt aca cta tac tgc gga tat gaa tat gat gac caa aaa agg 256
His Gln Val Thr Leu Tyr Cys Gly Tyr Glu Tyr Asp Asp Gln Lys Arg
45 50 55
ata tgt ctc cct gat gga ttt ata gca gag aaa cat caa aaa aga tca 304
Ile Cys Leu Pro Asp Gly Phe Ile Ala Glu Lys His Gln Lys Arg Ser
60 65 70 75
tat aaa att gag tgg gaa cat agt gtg cct gct gag aat ttt ggc aga 352
Tyr Lys Ile Glu Trp Glu His Ser Val Pro Ala Glu Asn Phe Gly Arg
80 85 90
gct ttt act gaa tgg cgc gaa ggt cat cct ctt tgt gta gat aat aaa 400
Ala Phe Thr Glu Trp Arg Glu Gly His Pro Leu Cys Val Asp Asn Lys
95 100 105
ggt aaa agt ttc aaa gga cga aaa tgt gca gaa aaa gta aat aaa aca 448
Gly Lys Ser Phe Lys Gly Arg Lys Cys Ala Glu Lys Val Asn Lys Thr
110 115 120

Substitute Sequence Listing

tat aga tat atg cag tct gat atg tac aat ttg ttt cca gca gtc ggg Tyr Arg Tyr Met Gln Ser Asp Met Tyr Asn Leu Phe Pro Ala Val Gly 125 130 135	496
tct gtc aat gct gcg aga agc aat aag caa tac tca gag tta ctt gga Ser Val Asn Ala Ala Arg Ser Asn Lys Gln Tyr Ser Glu Leu Leu Gly 140 145 150 155	544
gtt caa tct gct ttt gga acg tgt gag gca aaa ata gat ggg aat aga Val Gln Ser Ala Phe Gly Thr Cys Glu Ala Lys Ile Asp Gly Asn Arg 160 165 170	592
ttc gaa cca ccg gat aga gct aaa ggt caa gta gcc cgt gct gct ctt Phe Glu Pro Pro Asp Arg Ala Lys Gly Gln Val Ala Arg Ala Ala Leu 175 180 185	640
tat atg gat aaa gag tac aag gaa tac aat cta agt cgt cag caa aga Tyr Met Asp Lys Glu Tyr Lys Glu Tyr Asn Leu Ser Arg Gln Gln Arg 190 195 200	688
aga ctt ttt gag gct tgg agt aat atg tat cca gtc gat gaa tgg gag Arg Leu Phe Glu Ala Trp Ser Asn Met Tyr Pro Val Asp Glu Trp Glu 205 210 215	736
tgt aca cga gcc aaa cga atc gaa tct ata cag gga aat gaa aat att Cys Thr Arg Ala Lys Arg Ile Glu Ser Ile Gln Gly Asn Glu Asn Ile 220 225 230 235	784
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Ile Thr Leu Ala Glu Gly Asn Thr Phe Asn Asp Ser Phe Asn Lys Ala
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Lys Arg Ile Leu Gln Asp Glu Val Tyr Tyr Asp His Gln Val Thr Leu
35 40 45

Tyr Cys Gly Tyr Glu Tyr Asp Asp Gln Lys Arg Ile Cys Leu Pro Asp
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Gly Phe Ile Ala Glu Lys His Gln Lys Arg Ser Tyr Lys Ile Glu Trp
65 70 75 80

Glu His Ser Val Pro Ala Glu Asn Phe Gly Arg Ala Phe Thr Glu Trp

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Arg Glu Gly His Pro Leu Cys Val Asp Asn Lys Gly Lys Ser Phe Lys
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Gly Arg Lys Cys Ala Glu Lys Val Asn Lys Thr Tyr Arg Tyr Met Gln
115 120 125

Ser Asp Met Tyr Asn Leu Phe Pro Ala Val Gly Ser Val Asn Ala Ala
130 135 140

Arg Ser Asn Lys Gln Tyr Ser Glu Leu Leu Gly Val Gln Ser Ala Phe
145 150 155 160

Gly Thr Cys Glu Ala Lys Ile Asp Gly Asn Arg Phe Glu Pro Pro Asp
165 170 175

Arg Ala Lys Gly Gln Val Ala Arg Ala Ala Leu Tyr Met Asp Lys Glu
180 185 190

Tyr Lys Glu Tyr Asn Leu Ser Arg Gln Gln Arg Arg Leu Phe Glu Ala
 195 200 205

Trp Ser Asn Met Tyr Pro Val Asp Glu Trp Glu Cys Thr Arg Ala Lys
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Arg Ile Glu Ser Ile Gln Gly Asn Glu Asn Ile Phe Val Lys Asn Met
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Cys Ile Glu Lys Gly Leu Trp
245